

WEST NILE VIRUS Q& A FOR CLINICIANS

OVERVIEW OF WEST NILE VIRUS

What is West Nile Virus?

West Nile virus (WNV) is a flavivirus that is spread by mosquitoes. The virus is transmitted when mosquitoes become infected when they feed on infected birds. Infected mosquitoes can then transmit West Nile virus when biting a human or other animal.

Where did West Nile Virus come from?

West Nile has been found in parts of Africa, West Asia, Eastern Europe, and the Middle East. The virus was first identified in the Western Hemisphere in 1999 when it appeared in New York City. The West Nile virus is closely related to the virus that causes St. Louis Encephalitis.

SIGNS AND SYMPTOMS

What are the symptoms associated with West Nile virus?

West Nile may cause the following:

- *No Symptoms:*
 - Most people who are infected with West Nile virus have no symptoms. For approximately every 150 infected persons, only 1 person will have clinical disease.
- *Mild febrile illness:*
 - Signs include fever, headache, body aches, and occasionally with skin rash and swollen lymph nodes.
- *Aseptic meningitis*
- *Encephalitis:*
 - May result in more severe infections. Symptoms include headache, fever, disorientation, coma, tremors, seizures, muscle weakness, and rarely, death.
- *Profound muscle weakness:*
 - May result in Guillain-Barré Syndrome.

What is the incubation period in humans?

Usually 3 to 15 days.

Who is at risk for getting clinical disease?

All residents in which West Nile virus activity has been identified are at risk. Persons older than 50 years are at greater risk of severe disease.

DIAGNOSIS AND TREATMENT

How is West Nile virus infection diagnosed?

The most sensitive screening test for WN virus is the IgM-capture enzyme linked immunosorbent assay (ELISA) for serum. ELISA testing for WN virus is available at the

California Department of Health Services West Nile virus PCR will also be available. However, PCR detection of West Nile virus is low (~7%).

Clinically, West Nile virus infection resembles many other cases of encephalitis. It is important to remember that other etiologies for encephalitis must also be considered.

What cases should be referred to the Department of Health Services for testing?

During June through September (peak mosquito season), the following cases should be reported by phone:

- Suspected encephalitis (patients of all ages)
- Suspected aseptic meningitis (patients aged 17 and over)
- Atypical Guillain-Barré Syndrome (with fever, altered mental status and/or pleocytosis)

Particular attention should be paid to cases of viral encephalitis in adults (≥ 65 years of age).

How are patients referred to the California Department of Health Services for testing?

Suspect cases **must** be reported to county health departments before referring for testing. All cases should only be referred by physicians who are caring for patients with encephalitis, aseptic meningitis, or atypical Guillain-Barré as outlined. Clinicians should refer to “How to Report Suspected Cases of West Nile Virus.”

If you are a patient or family member, contact your health care provider.

How is West Nile virus treated?

There is currently no specific treatment for West Nile virus. Supportive care, however, continues to be important. More severe cases often require hospitalization.

PREVENTION

What can be done to prevent outbreaks of West Nile virus?

Prevention and control of West Nile virus and other arboviral diseases is accomplished through integrated vector management programs. These programs include surveillance for virus activity in mosquitoes, birds, horses, other animals, and humans. Mosquito control measures may be implemented to reduce mosquito populations. If and when virus activity is detected in an area, residents will be alerted to ensure reduced contact with mosquitoes.

What can I do to reduce my risk of becoming infected with West Nile virus?

- Avoid outside activity at dawn and dusk when mosquitoes are most active. This is particularly important for the elderly and small children.
- Wear protective clothing (long pants and long sleeves) and apply insect repellent when outside.
- Make sure that doors and windows have tight fitting screens. Repair or replace screens that have tears or holes in them.
- Drain all standing water on private property and stock permanent ponds with fish that eat mosquito larvae.
- Make sure roof gutters drain properly. Clean gutters in the spring and fall.